APPENDIX D
FIRING POSITIONS

A firing position must provide protection for the weapon system and its crew, but it also must allow for unhindered target engagement. Due to the fluid nature of offensive operations, occupation of an unprepared defilade position normally characterizes antiarmor fighting positions. While platoons and sections move, their leaders search for these firing positions and the best covered and concealed routes to them. When the leaders cannot make a visual reconnaissance of the terrain, they select tentative firing positions and routes from a thorough map reconnaissance. In the defense, antiarmor squads use firing positions with improved frontal and overhead protection. As the defender, they have more time to learn the terrain and to increase their protection and concealment.

D-1. PLANNING

In the offense, antiarmor units employ their weapon (TOW, M2, or MK19) on the weapon system carrier (either the HMMWV or the ICV). In the defense, antiarmor units employ these weapons either mounted or dismounted. Leaders make the decision as to mounted or dismounted employment after thoroughly considering the factors of METT-TC. They also must consider the loss of mobility that results when an antiarmor weapon system is dismounted from its vehicle.

D-2. SELECTION OF FIRING POSITIONS

Indirect fires present the greatest danger to antiarmor squads. For this reason, covered and concealed locations are critical for an antiarmor squad's survival. Squads avoid firing positions that could be easily identified by an enemy map reconnaissance. The enemy normally fires artillery and mortar fires to support an attack based on a schedule. Enemy forces in an offense have limited ability to fire on targets of opportunity. Therefore, choosing firing positions carefully will help antiarmor squads avoid much of these indirect fires.

a. Squad leaders select firing positions that afford maximum protection yet allow the gunner to effectively engage the targets. Firing position selection begins when each section is assigned a mission, a sector of fire or a portion of an engagement area, and a general location. The section leader then designates a firing position for each of his two antiarmor squads.

b. Leaders select positions below ridgelines and crests, preferably on the sides of hills. Positions, along with the routes to them, should be as dry and as level as possible. Leaders should avoid choosing positions such as swampy areas, steep hillsides, and on or near prominent terrain features.

c. Leaders select firing positions during daylight and position antiarmor squads at night to reduce the chance of enemy detection. Leaders must not assume that darkness provides concealment for their firing positions. Through the use of night vision devices, enemy forces see almost as well in darkness as in daylight. Thermal imagery devices sense the heat emitted by vehicles and personnel. These devices provide the enemy with a capability to see through smoke, light foliage, and camouflage. Antiarmor squads continuously improve their positions throughout mission preparation.

d. Each antiarmor squad's firing position must provide the following advantages:
- Cover to the front, flank, and overhead.
- Concealment from ground and aerial observation.
- Good observation and fields of fire into the assigned portion of an engagement area.
- Covered and concealed routes to, and between, positions.
- Mutual support between antiarmor squad positions and with other elements.

D-3. PRIMARY, ALTERNATE, SUPPLEMENTARY, AND SUBSEQUENT POSITIONS

Each antiarmor squad must have a primary firing position. Leaders may assign any number of alternate, supplementary, and subsequent positions as a result of their analysis of the factors of METT-TC.

a. **Primary Position.** The initial firing position from which an antiarmor squad covers an assigned sector of fire or portion of an engagement area along an enemy's most likely avenue of approach is referred to as the squad's primary position (Figure D-1) and is the best position for engaging enemy vehicles. The company commander or platoon leader usually designates the general location of this position.

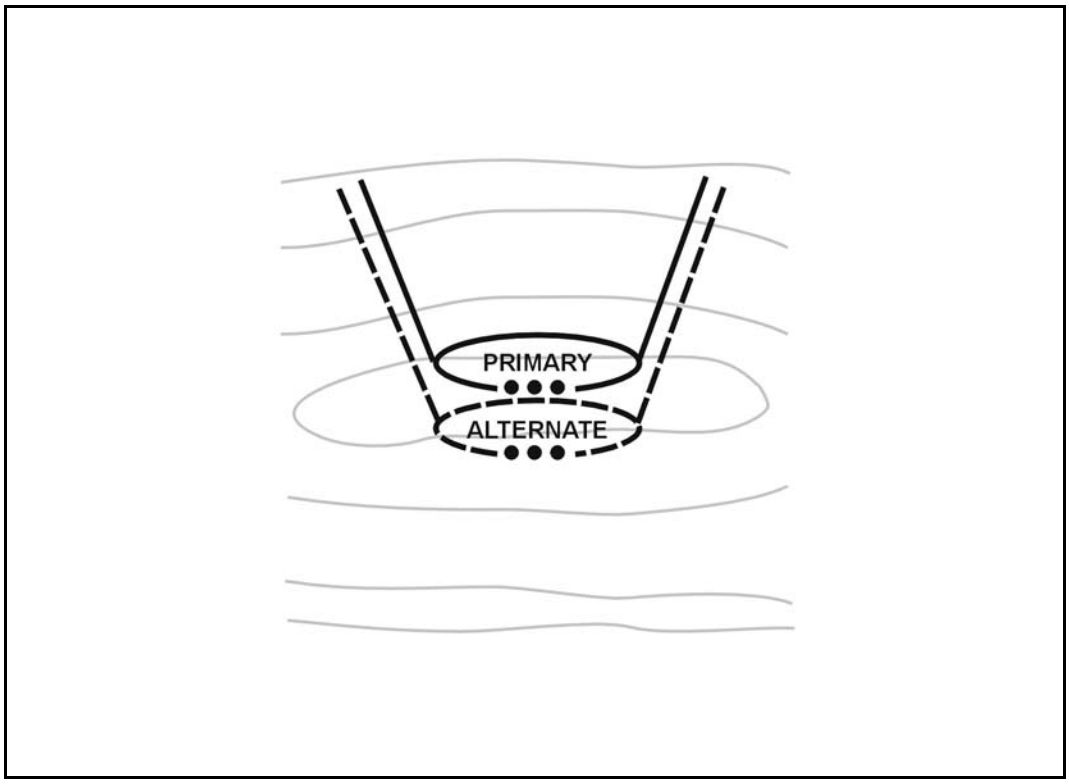

Figure D-1. Primary and alternate position.

b. **Alternate Position.** An antiarmor squad's alternate position (Figure D-1) must be able to cover the same enemy avenue of approach or sector of fire as from the primary position. The company commander or platoon leader designates the locations of alternate positions to be used when primary positions become untenable or unsuitable for the assigned

task. When squads have sufficient time and resources, they construct an alternate position to the same level of preparation as a primary position.

(1) As a guideline, an alternate position should be located 300 meters or more (METT-TC dependent) from the primary position to reduce the chance that indirect fire that suppresses the primary position also will affect the alternate position. Though terrain may not allow this much space, leaders should always consider this guideline when selecting alternate positions.

(2) If the antiarmor squad leader selects alternate positions, he should report the locations of each alternate position to the section leader and platoon leader.

c. **Supplementary Position.** The supplementary position (Figure D-2) allows the antiarmor squad to cover an enemy avenue of approach or sector of fire that is different from that covered by the primary or alternate positions. It usually is chosen to cover avenues of approach to the flank or rear of a unit. The antiarmor squad reconnoiters this position and prepares a range card. Leaders will typically base occupation of a supplementary position on specific enemy actions.

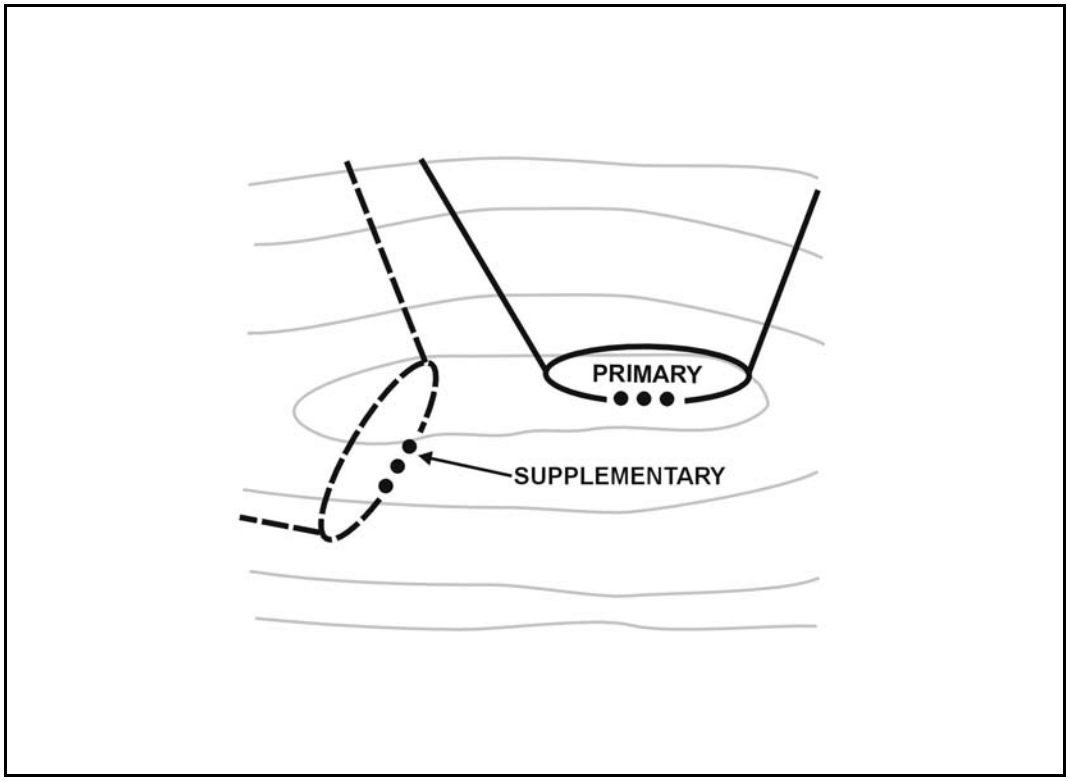

Figure D-2. Supplementary position.

d. **Subsequent Position.** The subsequent position (Figure D-3, page D-4) is a position that a unit expects to move to during the course of battle. A defending antiarmor unit may have numerous subsequent positions. These positions may also have primary, alternate, and supplementary positions associated with them.

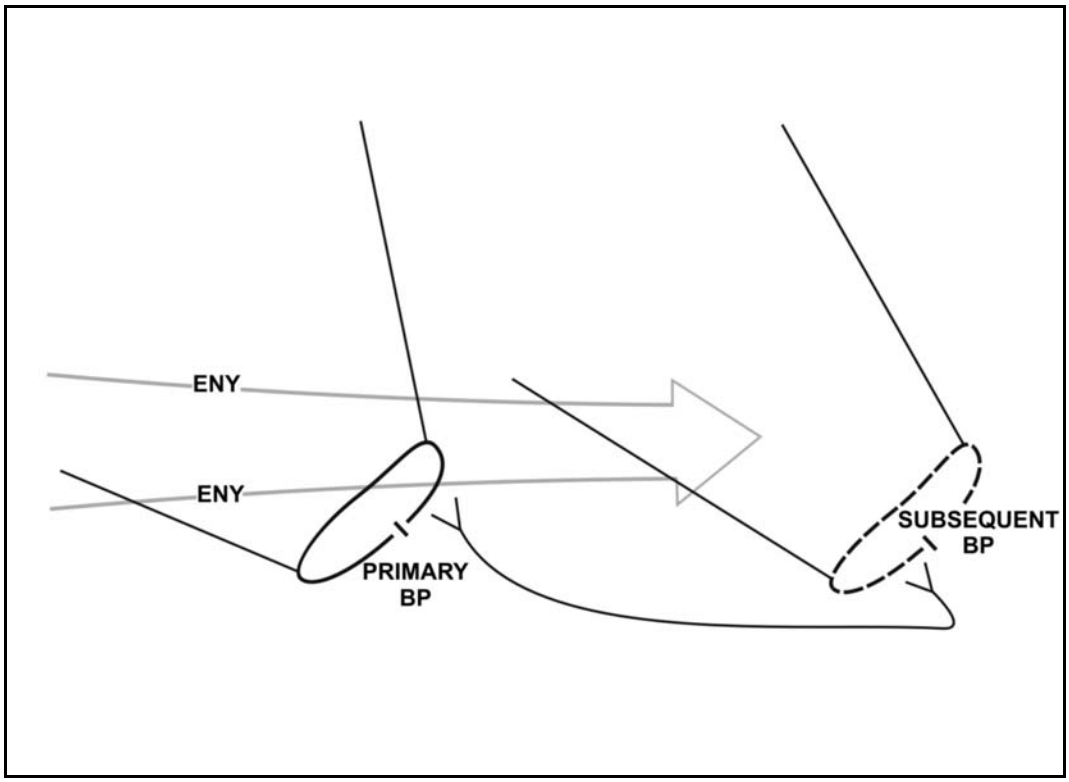

Figure D-3. Subsequent position.

D-4. FIRING POSITION PREPARATION.

The company commander or platoon leader will designate the level of preparation for each firing position based on the factors of METT-TC, with emphasis on the time available. There are three levels of preparation: reconnaissance, preparation, and occupation.

a. **Reconnaissance.** Leaders must reconnoiter the EA or AO and firing positions. They must get on the ground to physically inspect the terrain and determine its effects on antiarmor weapons employment and on enemy weapons employment. In the offense, this reconnaissance will typically occur through a detailed map reconnaissance. General positions with limited fire control measures must be identified during reconnaissance.

b. **Preparation.** The platoon or section begins preparing a firing position as soon as the leaders complete their reconnaissance. The leaders call the vehicles forward and guide them into position. They may consider having drivers back the vehicles into position so they can leave quickly without moving toward the enemy or using time to turn around. The unit removes or camouflages all signs that the enemy could detect (such as wheel tracks, windshield reflections). Antiarmor squads continue to improve the position until it is vacated. Preparation includes, but is not limited to--

- Marking the position.
- Emplacing fire control measures (as required).
- Digging the position.
- Identifying and digging ammunition caches.
- Preparing a range card.

- Emplacing protective obstacles.

- Camouflaging the position.

The antiarmor squad occupies the general position identified by the platoon leader or section leader and establishes security. Each antiarmor squad must be prepared to fight while it prepares the position. Maintaining security during preparation allows the antiarmor squad to react quickly if the enemy appears before the position has been completed.

(1) After selecting a firing position, the leaders mark the position with stakes and prepare a range card. This enables the squad or another squad to occupy the firing position and use the data from the range card for the position. They use three stakes to mark a mounted firing position (Figure D-4). One stake is placed in front of and centered on the vehicle. It should be long enough so that the driver can see it as he moves the vehicle into position. The other two stakes are placed parallel to the left side of the vehicle and lined up with the hub on the front and rear wheels. The stakes are placed close to the vehicle with enough clearance to allow the driver to move into the position without knocking the stakes down. The stakes are driven solidly into the ground. Engineer tape or luminous tape can be placed on the friendly side of the stakes to make it easier to see them during limited visibility.

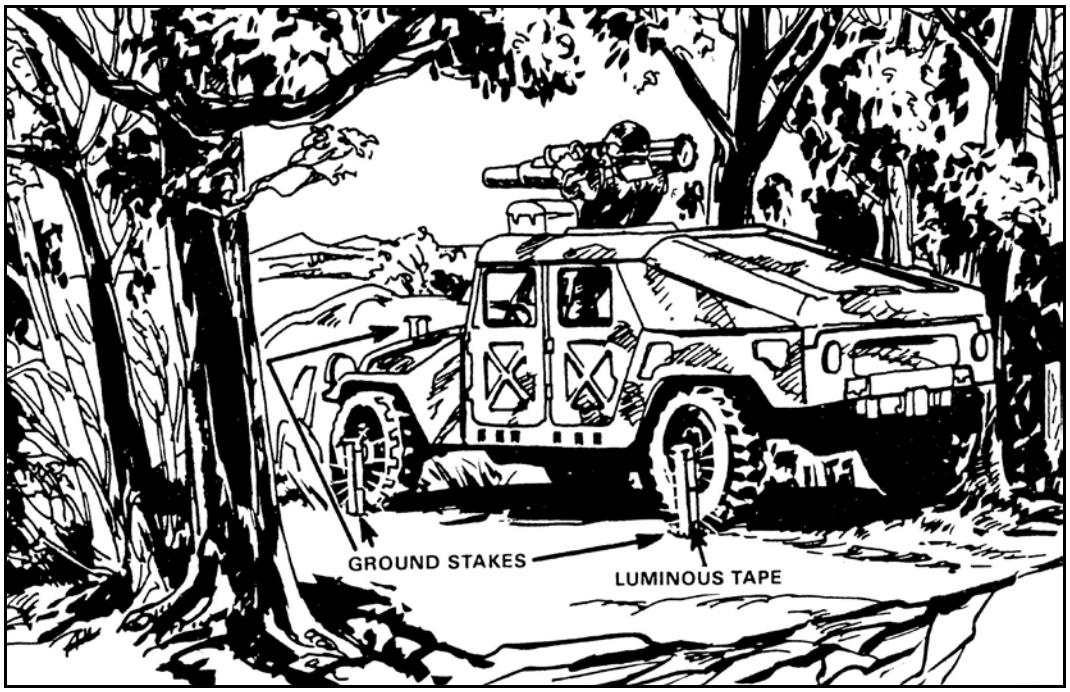

Figure D-4. Staking the position.

(2) Once the antiarmor squad has dug the position, it camouflages it. Squad members use sod, leaves, brush, grass, or any other natural material to do so. The items should not be taken from the immediate area of the position. Camouflage nets or other man-made materials also are used, but these work best if used with natural materials. The position should look as natural as possible.

c. **Occupation.** The company commander or platoon leader must establish triggers for occupation of the position.

(1) Vehicles approach the firing position from the rear using terrain-driving techniques on a rehearsed route.

(2) To reoccupy a marked position, the driver aligns his vehicle on the front stake and moves forward slowly until the two stakes on the left of his vehicle are centered on the front and rear wheels.

(3) Antiarmor units must develop an SOP for occupying a firing position. The SOP must include the sequence of action and the priority of work. This ensures that all squad members know what is expected of them.

D-5. TYPES OF ANTIARMOR POSITIONS

Based on a thorough analysis of the factors of METT-TC, leaders select the appropriate type of antiarmor firing position for the situation.

a. **Mounted Position**. The mounted firing position is characterized by a hull-down posture. The vehicle is positioned behind either a natural or constructed cover with only the selected antiarmor system exposed. Leaders should seek a natural hull-down position (Figure D-5) whenever it is available. During offensive operations, natural hull-down positions are identified by a detailed map reconnaissance. When a natural hull-down position is not available, the unit obtains engineer assistance to excavate hull-down positions (Figure D-6). When hide positions are used, the primary firing positions should be hull-down positions. Leaders should select or construct hull-down positions so that the vehicle moves quickly into complete defilade. Routes into and out of hull-down positions should offer sufficient cover and concealment (Figure D-7, page D-8).

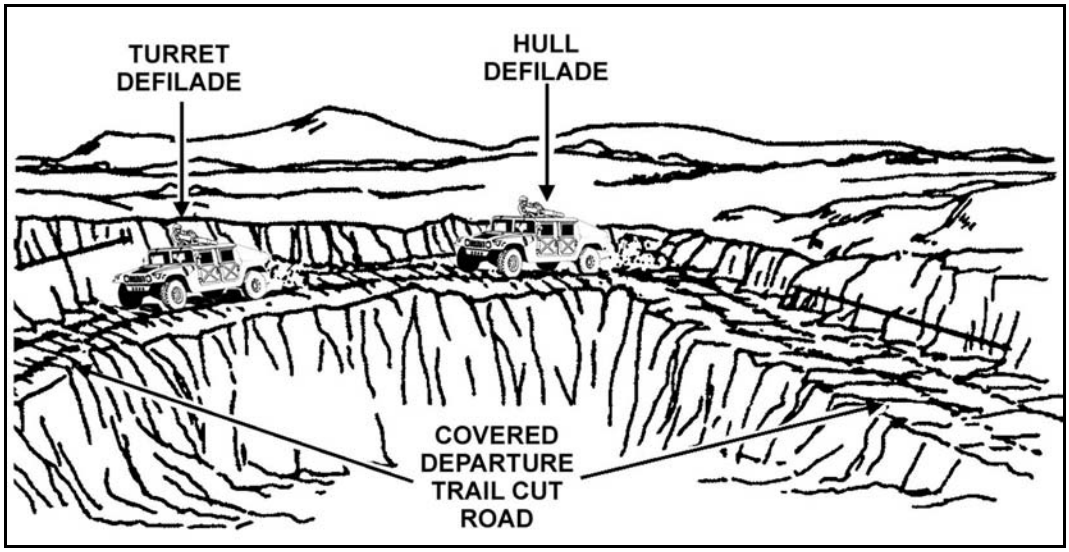

Figure D-5. Natural hull-down position.

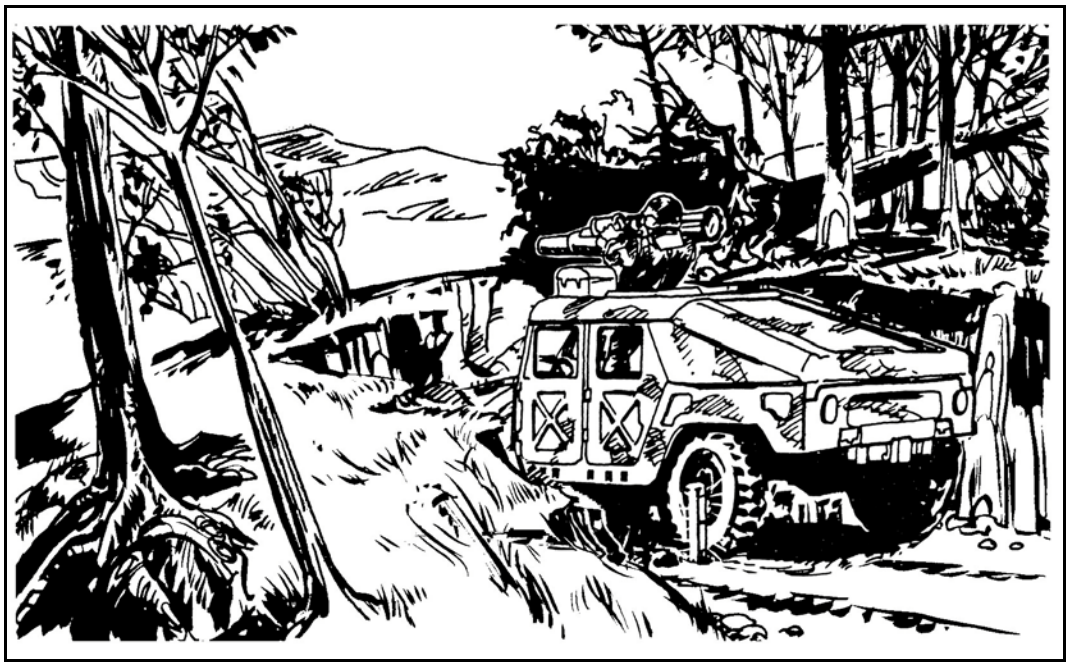

Figure D-6. Excavated hull-down position

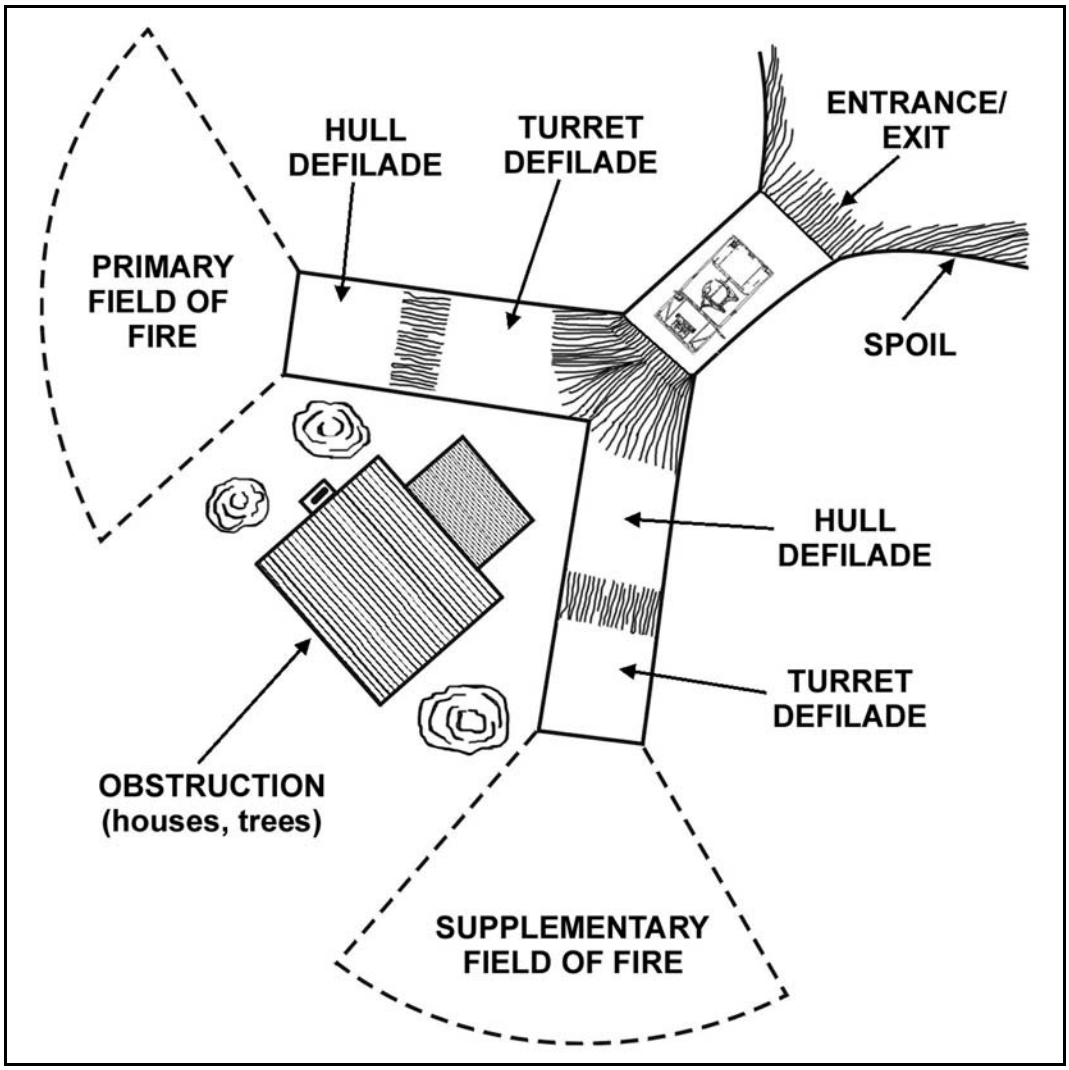

Figure D-7. Hide position to hull-down position

b. **Dismounted Position.** The dismounted position must have cover and concealment to protect squads from direct and indirect fires. Overhead cover must be camouflaged. Overhead cover must allow room to effectively operate the selected weapon system (for example, able to raise the bridge clamp and insert the missile's indexing lugs into the indexing slots on the launch tube). Individual weapons must be positioned for effective self-defense.

(1) The squad keeps the selected weapon system mounted in the vehicle while it constructs a dismounted position and the gunner prepares a range card. The tripod outlines the dismounted position (Figure D-8). Once the position is complete, the squad emplaces the selected weapon system in the position and camouflages the position.

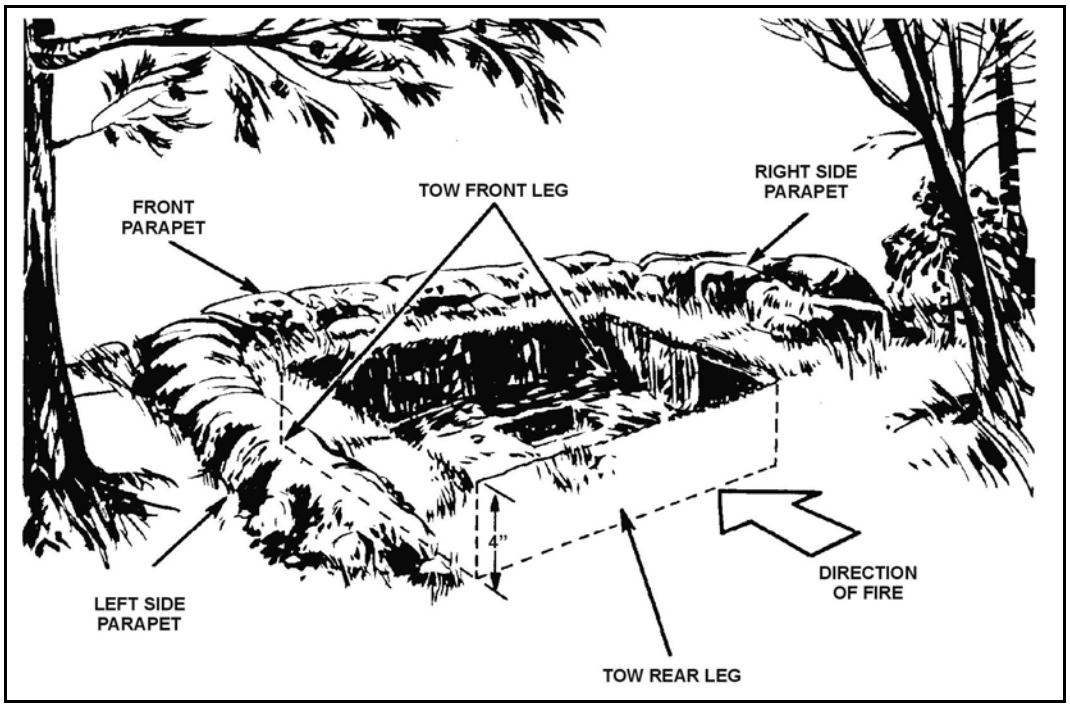

Figure D-8. Outline of dismounted position

(2) The squad constructs parapets to the front and flanks that are at least 18 inches thick (the length of two collapsed entrenching tools) for protection from small-arms fire and mortar and artillery fragments. For TOW employment, the squad ensures a 9-inch clearance (the length of one collapsed entrenching tool) between the bottom of the launcher tube and the parapet. The squad digs a hole between the tripod legs for the missile guidance set (Figure D-9, page D-10). The squad digs the position no more than 24 inches deep (the length of a fully extended entrenching tool) to ensure adequate LOS clearance on flat terrain out to ranges of between 500 and 900 meters

(3) The squad digs additional positions on each side and to the rear of the antiarmor position. The squad also adds overhead cover for personnel and for the ammunition to each of these positions (Figure D-9, page D-10).

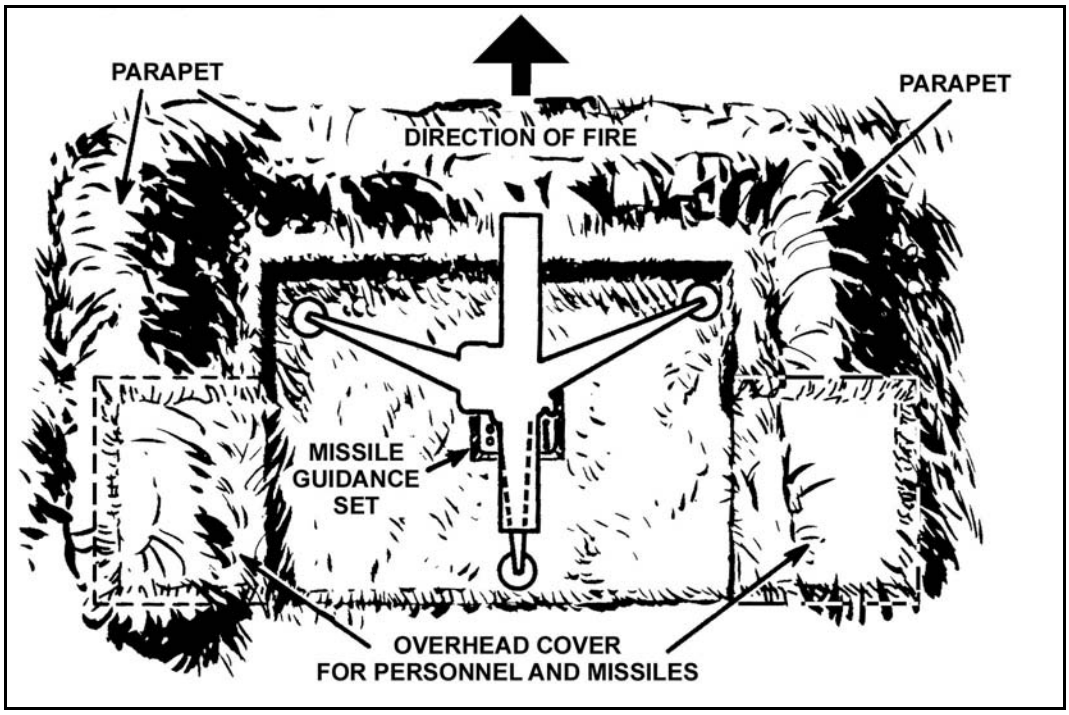

Figure D-9. Overhead cover and missile guidance set position.

(4) The squad reinforces the walls of the position with sandbags if the soil or water table does not support a dug-in position. (See FM 5-103 for construction and water drainage methods.)

(5) The squad builds the overhead cover to conform to the terrain, making the position more difficult to detect. For adequate protection from mortar or artillery fragments, the squad uses logs four to six inches in diameter and covers them with 12 to 14 inches of soil. The total protection should equal 18 inches (the length of two collapsed entrenching tools).

(6) The squad places a layer of waterproof material, such as packing material or a poncho, over the logs before adding the dirt to help keep the position dry. If sandbags are used, the squad covers them with waterproof material. Wet sandbags are heavy and can cause a cave-in.

c. **Anitarmor Ambush Position.** The squad constructs a simple dismounted position to conduct an antiarmor ambush. This position should be large enough to conceal the antiarmor system and the squad until the ambush is completed. The position requires no overhead cover. In fact, the antiarmor squad uses existing terrain features for this purpose. In choosing this position, the squad leader considers whether his squad can survive returned fire from the ambushed enemy element. The weight of the selected antiarmor system and the distance it must travel are important planning considerations because they prevent the squad from quickly withdrawing from the ambush site.

d. **Urban Terrain Position.** The squad leader considers the same crew survival question that he would for an antiarmor ambush position. (See FM 5-103 and FM 90-10-1 for more information.) Urban terrain affords the squad more cover and concealment. However, urban terrain does present certain firing limitations. For example, the TOW should be fired from a building only when the following conditions exist:

- The building is sturdy.

- The ceiling is at least 2 meters (7 feet) high.
- The room is at least 5 meters by 8 meters (17 feet by 24 feet) or larger.
- There are 2 square meters (20 square feet) of ventilation to the rear of the system (an open door 2 meters by 1 meter [7 feet by 3 feet] provides that much ventilation).
- Glass is removed from all windows and doors, the floor is swept, and any furniture and other objects that could be blown around are removed from the room.
- Squad members in the room are wearing hearing protection and ballistic eye protection and are positioned forward of the rear end of the launch tube.

D-6. GROUND CLEARANCE FOR TOW MISSLE EMPLOYMENT

Two clearance requirements are observed to ensure that a TOW missile will not hit the ground before reaching a target.

a. The muzzle clearance around the end of the launch tube should be at least 9 inches. This clearance ensures the wings and control surfaces can freely extend after the missile clears the launch tubes. If the wings are damaged or if they catch on an object, the missile may fly erratically or fall to the ground.

b. The missile's launch motor pushes the missile out of the tube. The missile's flight motor then accelerates the missile for 500 to 900 meters to obtain its flight speed. Somewhere between these distances, the missile's trajectory drops. A missile also does not precisely follow a gunner's LOS to the target. To compensate for this and to prevent the missile from hitting the ground or an obstruction, the gunner allows 30 inches of clearance along the LOS between the launcher and the ground (Figure D-10). If the LOS clearance is less than 30 inches, the probability of the missile hitting the ground or an obstruction is increased. Table D-1, page D-12, highlights the probability of survival for the TOW missile.

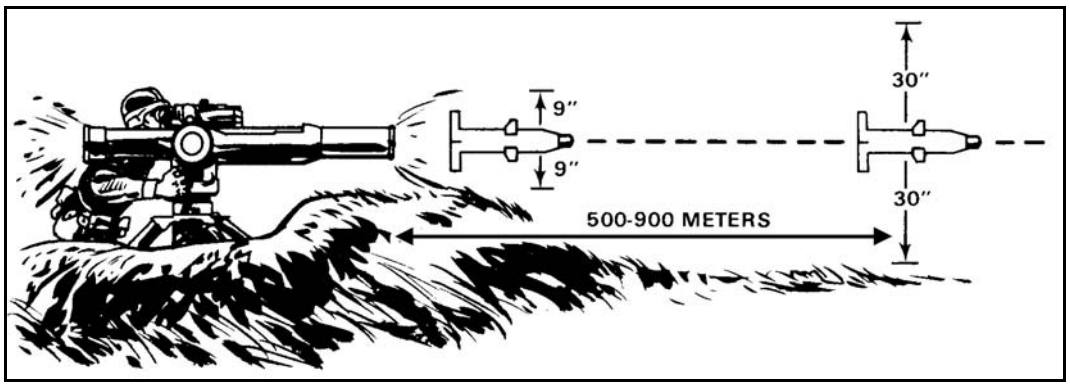

Figure D-10. Ground clearance

METERS		HEIGHT OF LINE OF SIGHT ABOVE THE GROUND		
		18 INCHES	20 INCHES	30 INCHES
RANGE TO TARGET	200	.98	.98	1.0
	300	.95	.96	1.0
	400	.91	.91	.98
	500	.86	.91	.98
1,000 to 3000/3,750		.56	.61	.93

Table D-1. Probability of survival for the TOW.

D-7. FIGHTING AND SURVIVABILITY POSITIONS

The commander's defensive plan will normally require building fighting positions. Fighting positions protect soldiers by providing cover from direct and indirect fires and by providing concealment through positioning and proper camouflage.

a. **Standard Designs.** When expecting an immediate enemy attack, infantrymen dig hasty fighting positions. As time becomes available these are improved, enlarged, and strengthened, a process that continues as long as the unit occupies a defensive position. Because the battlefield conditions confronting infantrymen are never standard, there is no single standard fighting position design that fits all tactical situations.

(1) Sometimes soldiers must construct fighting positions using only the basic tools and materials they can carry or find in the local area, such as entrenching tools, sandbags, and locally cut timber. At other times significant amounts of Class IV construction materials and heavier digging tools may be available.

(2) At times the terrain will accommodate the construction of a position with overhead cover that protects soldiers from indirect fire fragmentation while allowing them to return fire. Sometimes, especially on open terrain, this is not possible and the entire position must be built below ground level. Although this type position offers the occupants' excellent protection and concealment, it limits their ability to return fire from within a protected area.

(3) Infantry fighting positions are normally constructed to hold one, two, or three soldiers. There are special designs adapted for use by machine gun and antitank missile teams. Fighting vehicles in hull- and turret-defilade positions should be integrated into the unit defense, although not necessarily adjacent to infantry positions

(4) Regardless of the position design, the type of construction materials, the tools available, or the terrain, all fighting positions must incorporate sound engineering construction principles. Unless it is constructed properly, a fighting position can easily collapse and crush or bury the soldiers within.

NOTE: FM 5-103 and FM 5-34 provide excellent information on these principles. Additionally, GTA 05-08-001 and GTA 07-06-001 contain detailed information in easy-to-use formats.

(5) In constructing fighting positions, soldiers should--

- Dig the positions no deeper than armpit deep.
- Fill sandbags no more than 75 percent full.
- Use revetments to support excavations in sandy soil.
- Check stabilization of wall bases.
- Inspect and test the position daily, after heavy rain, and after receiving fire.

- Maintain, repair, and improve positions constantly.
- Keep all vehicles at least five meters away from the position.

b. **Priority of Work.** Leaders must ensure that soldiers prepare for the defense quickly and efficiently. Work must be done in priority to accomplish the most work in the least amount of time while maintaining security and the ability to respond to enemy action. Priorities of work include--

- Emplace OPS and conduct local security patrols.
- Position and assign sectors of fire for TOWs and machine gun teams (platoon leader).
- Position and assign sectors of fire for SAW gunners, grenadiers, and then riflemen (squad leaders).
- Clear fields of fire and prepare range cards and sector sketch.
- Dig fighting positions (stage 1). See Paragraph D-7c(2)(a) below.
- Establish communications with the company team and adjacent units.
- Emplace antitank and Claymore mines, then wire and other obstacles.
- Improve primary fighting positions and add overhead cover (stage 2). See Paragraph D-7c(2)(b) below.
- Prepare supplementary and then alternate positions.
- Distribute and stockpile ammunition, food, and water.

Several of these actions may be accomplished at the same time. Leaders must constantly supervise the preparation of fighting positions, both for tactical usefulness and proper construction.

c. Principles. Three basic principles govern construction of fighting positions: site position to best engage the enemy, prepare by stages, and leaders inspect all positions.

(1) ***Site Positions to Best Engage the Enemy.*** The most important aspect of a fighting position is that it must be tactically well positioned. Leaders must be able to look at the terrain and quickly identify the best location for fighting positions.

- Soldiers must be able to engage the enemy within their assigned sectors of fire.
- They should be able to fire out to the maximum effective range of their weapons with maximum grazing fire and minimal dead space.
- Grenadiers should be placed in positions to cover dead space.
- Leaders must ensure fighting positions provide mutually supporting, interlocking fires. This allows them to cover the platoon's sector from multiple positions and to provide a basis for final protective fires.
- When possible, site positions behind natural cover and in easily camouflaged locations. The enemy must not be able to identify the position until it is too late and he has been effectively engaged.

(2) ***Prepare Positions by Stages.*** Leaders must ensure their soldiers understand when and how to prepare fighting positions based on the situation. Soldiers prepare hasty fighting positions every time the platoon makes an extended halt. Half of the platoon digs in while the other half maintains security. Soldiers prepare positions in stages and a leader inspects the position at each stage before they move to the next stage. (See the following example.)

(a) **STAGE 1:** The platoon leader checks fields of fire from the prone position. The soldiers--

- Emplace sector stakes (Figure D-11).

- Stake the primary sector.
- Position grazing fire log or sandbag between the sector stakes.
- Place the aiming stake(s), if required, to allow limited visibility engagement of a specific target.
- Scoop out elbow holes.
- Trace the outline of the position on the ground.
- Clear fields of fire for both primary and secondary sectors.
- The leader inspects the position.

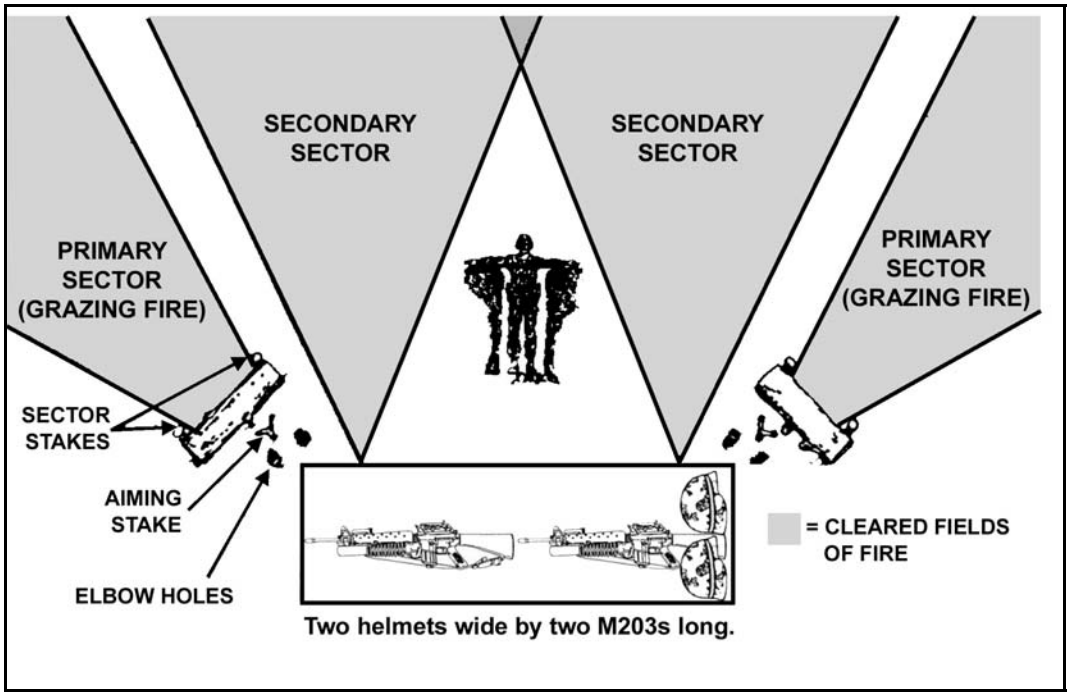

Figure D-11. Stage 1, Preparation of a fighting position.

(b) **STAGE 2:** Soldiers prepare retaining walls for the parapets. They ensure that--

- There is a minimum distance (equal to the width of one helmet) from the edge of the hole to the beginning of the front, flank, and rear cover (Figure D-12).
- The front cover is two to three sandbags (or logs) high. For a two-soldier position, it is about two M203 lengths long.
- The flank cover is the same height, but only one M203 rifle long.
- The rear cover is one sandbag high and one M203 long.
- If logs are used, they must be held firmly in place with strong stakes.
- The leader inspects the retaining wall.

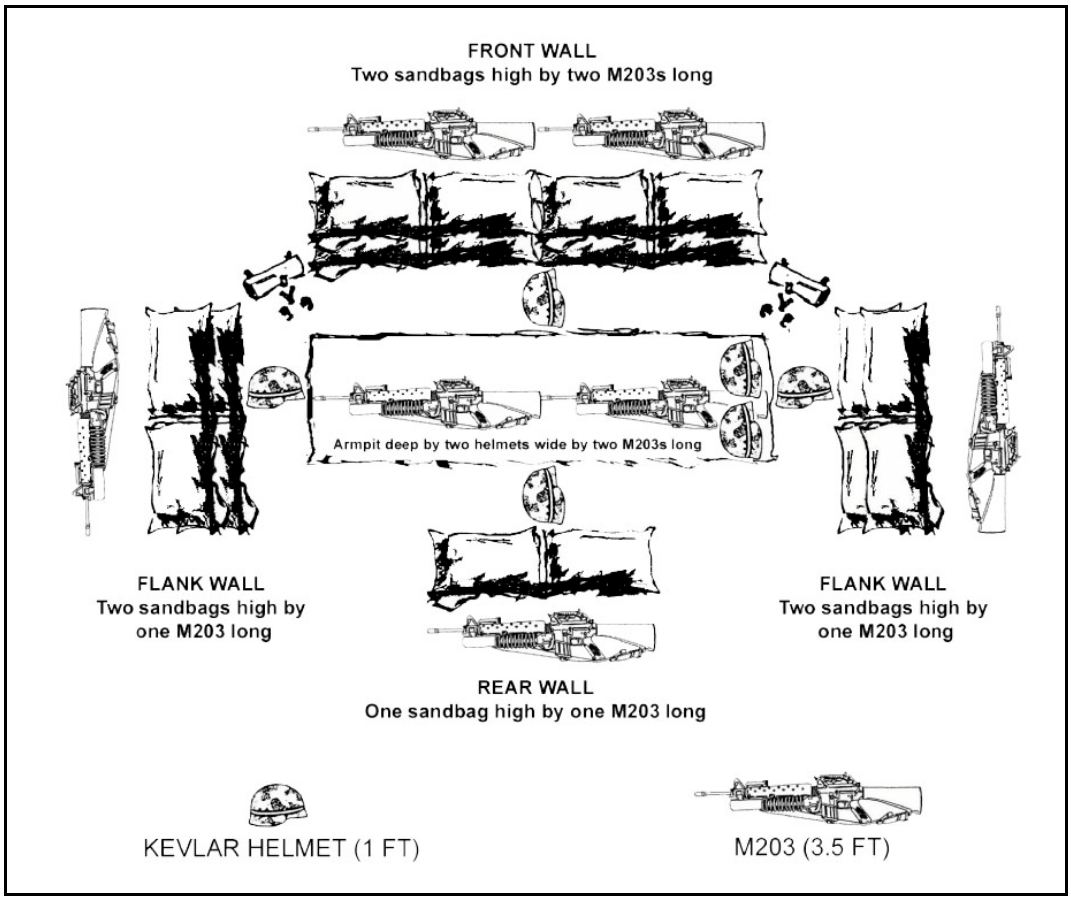

Figure D-12. Stage 2, Preparation of a fighting position.

(c) **STAGE 3:** Soldiers dig the position and throw dirt forward of the parapet retaining walls and pack it down hard (Figure D-13, page D-16). They--

- Dig the position armpit deep (tallest soldier).
- Fill the parapets in order of front, flanks, and rear.
- Camouflage the parapets and the entire position.
- Dig grenade sumps and slope the floor toward them.
- Dig storage areas for the two rucksacks into the rear wall if needed.
- Ensure the leader inspects the work.

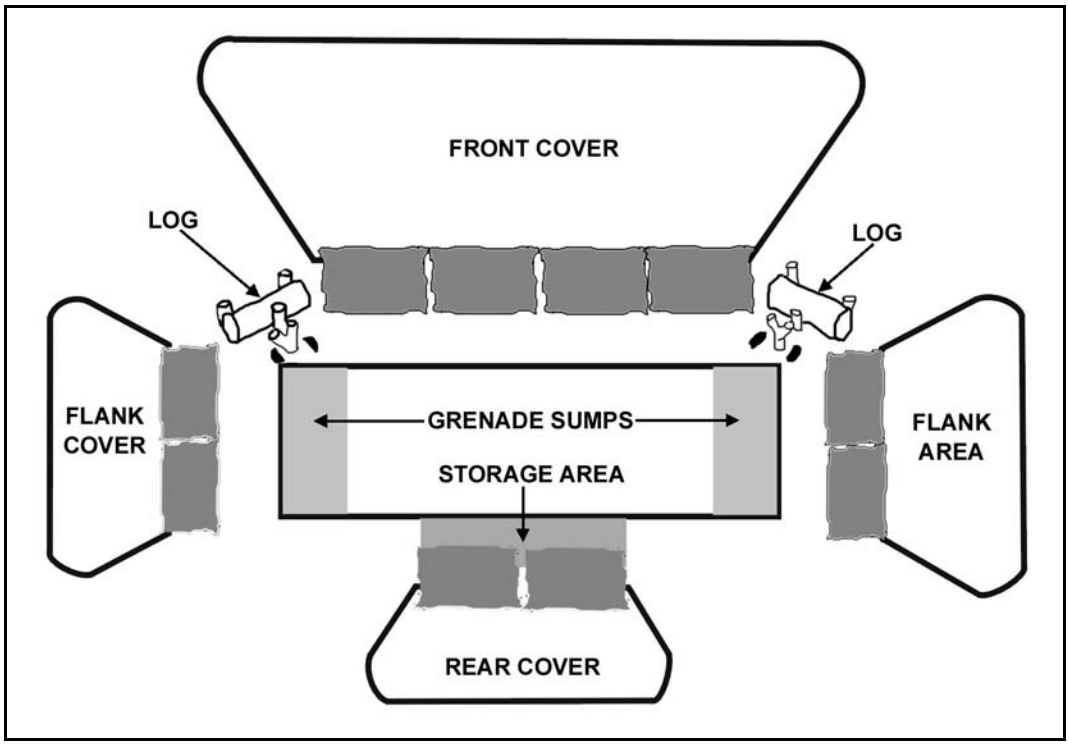

Figure D-13. Stage 3, Preparation of a fighting position.

(d) **STAGE 4:** Soldiers prepare the overhead cover (Figure D-14). They--

- Always provide solid support for overhead cover. Build the support using 4- to 6-inch logs on top of each other running the full length of the front and rear cover.
- Place five or six logs 4 to 6 inches in diameter and two M203s long over the center of the position, resting them on the overhead cover support, not the sandbags.
- Place waterproofing (plastic bags, ponchos) on top of these logs.
- Put a minimum of 18 inches of packed dirt or sandbags on top of the logs.
- Camouflage the overhead cover and the bottom of the position.
- Ensure the leader inspects the position.

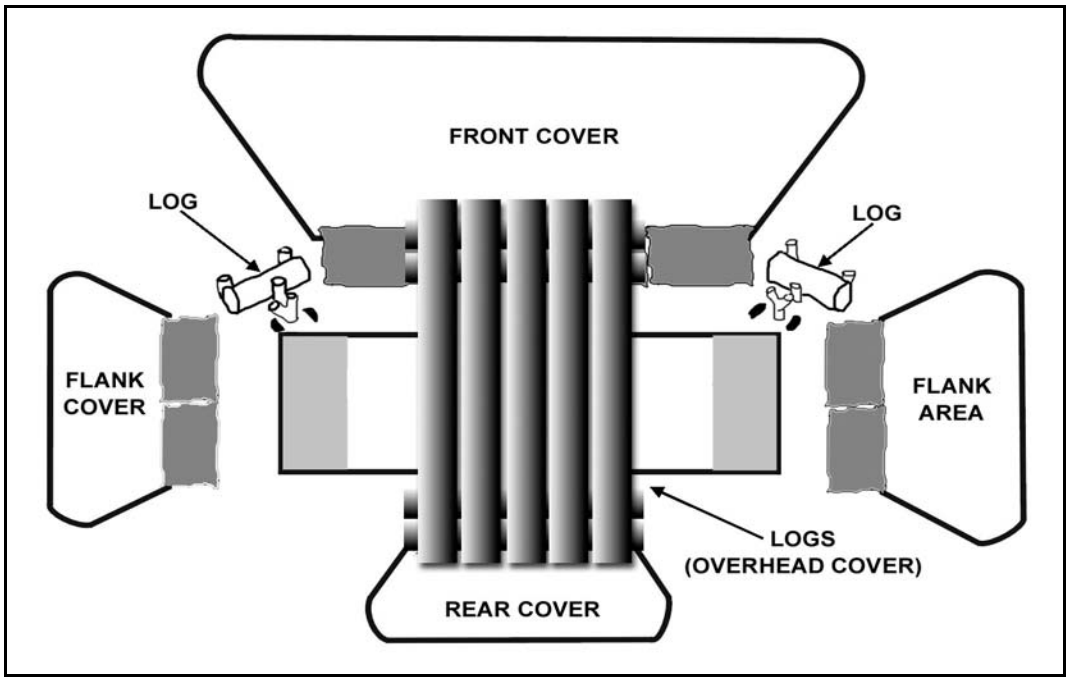

Figure D-14. Stage 4, Preparation of a fighting position.

(3) ***Leaders Inspect All Positions.*** Leaders must ensure their soldiers build fighting positions that are both effective and safe. An improperly sited position cannot be used and an improperly constructed one is a danger to its occupants.

D-8. M2 (CALIBER .50) AND MK 19 MACHINE GUN FIRING POSITIONS

Mounted positions for the MK19 and M2 are identical to those of the TOW. The use of hull-defilade firing platforms and full-defilade hide positions are critical. The following paragraphs provide information peculiar to the construction of MK19 and M2 dismounted firing positions.

a. **M2 Position.** The primary sector of fire is usually to the oblique so the gun can fire across the platoon's front. The tripod is used on the side covering the primary sector of fire. The bipod legs are used on the side covering the secondary sector of fire. When changing from primary to secondary sectors, the gunner moves only the machine gun. Occasionally a sector of fire that allows firing directly to the front is assigned, but this can reduce the frontal cover for the crew when firing to the oblique (Figure D-15, page D-18).

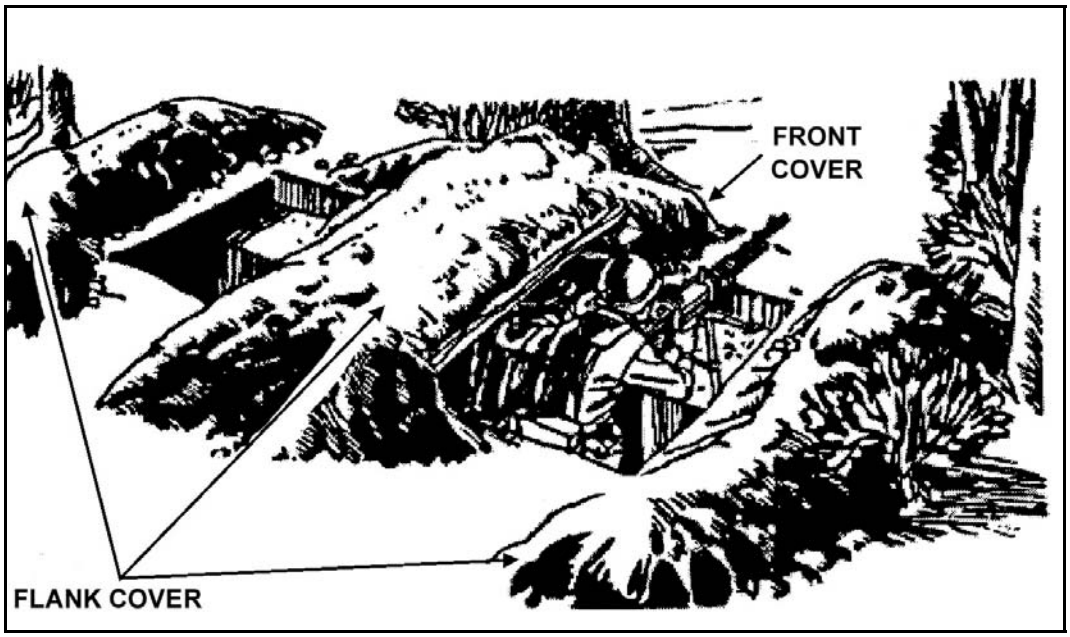

Figure D-15. Machine gun position.

(1) After the platoon leader positions the machine gun, he marks the position of the tripod legs and the limits of the sectors of fire. The crew then traces the outline of the hole and the frontal cover (if it must be improved).

(2) The crew digs firing platforms first to lessen their exposure in case they must fire before they complete the position. The platforms must not be so low that the gun cannot be traversed across its entire sector of fire, reducing the profile of the gunner when firing and reducing the frontal cover height.

(3) After digging the firing platforms, the crew digs the hole. They first place the dirt where frontal cover is needed, digging the hole deep enough to protect them and still allow the gunner to fire with comfort (usually about armpit deep). When the frontal cover is high enough and thick enough, the crew uses the rest of the dirt to build flank and rear cover. Trench-shaped grenade sumps are dug at various points so either soldier can kick a grenade into one if needed. Overhead cover for a machine gun position is built the same as for a two-soldier position.

NOTE: In some positions, a machine gun might not have a secondary sector of fire. In this case, dig only half the position.

(4) When there is a three-soldier crew for a machine gun, the ammunition bearer digs a one-soldier fighting position to the flank that is connected to the gun position by a crawl trench. From his position, the ammunition bearer can see and fire to the front and to the oblique. The ammunition bearer usually is on the same side as the FPL or PDF. This allows him to see and fire his rifle into the machine gun's secondary sector and to see the gunner and assistant gunner.

b. **MK 19**. The MK19 position is constructed similar to the machine gun position (Figure D-15) and is constructed after the weapon is positioned so that it is oriented on the center of the assigned sector of fire. The tripod legs are outlined to ensure the firing platform

is properly constructed. The position is dug in an L-shape around the firing position. It should be approximately chest-deep (tallest soldier) and wide enough to allow the squad to load, operate, and place fire on the assigned sector of fire. In constructing the over head protection for the position, allowance must be made for elevation of the gun during firing.

c. Three-Soldier Fighting Position. A three-soldier position has several advantages. A leader can be in each position, making command and control easier. It supports continuous security operations better than other positions. One soldier can provide security; one can do priority work; and one can rest, eat, or perform maintenance. This allows the priority of work to be completed more quickly than in a one- or two-soldier position. This position allows the platoon to maintain combat power and security without shifting personnel or leaving positions unmanned. It provides 360-degree observation and fire, and it is more difficult for the enemy to destroy because he must kill or suppress three soldiers.

(1) When using three-soldier positions, the leader must consider several things. Either the distance between positions must be increased or the size of the squad's sector must be reduced. The choice depends mainly on visibility and fields of fire. Because the squad leader is in a fighting position that will most likely be engaged during the battle, he cannot exert personal control over the other two positions. The squad leader controls the battle by--

- Clearly communicating his plans and intent to his squad to include control measures and fire plans.
- Using prearranged signals like flares, whistles, or tracers.
- Positioning key weapons in his fighting position.
- Placing his fighting position so it covers key or decisive terrain.
- Placing his fighting position where his team might be able to act as a reserve.

(2) The three-soldier emplacement is a T-position. This basic design can be changed by adding or deleting berms, changing the orientation of the T, or shifting the position of the third soldier to form an L instead of a T (Figure D-16, page D-20). The layout of the position can be oriented to fire on expected enemy avenues of approach from any direction. Berms must not block observation or fire into assigned primary or alternate sectors. Care must be taken to properly support the overhead cover.

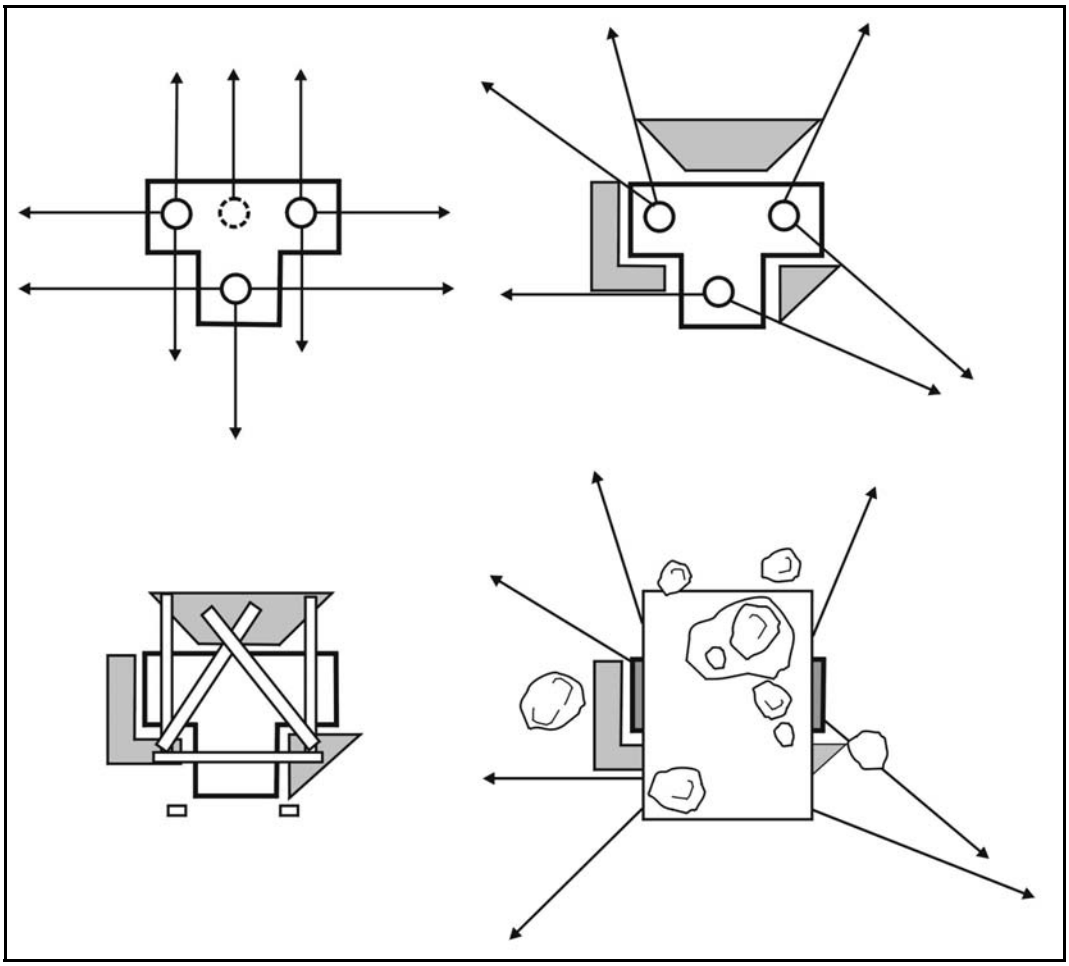

Figure D-16. Three-soldier T-position.

D-9. RANGE CARD

A range card is a sketch or diagram of the terrain that a weapon must cover by direct fire. It shows planned target areas and terrain features, each of which is plotted relative to that weapon's firing position. The information on a range card is used to plan and control fire, to rapidly detect and engage targets, and to orient replacement personnel and units. Instructions for completing a range card are found in FM 23-34.

D-10. SECTOR SKETCH

Individual soldiers and gunners prepare range cards. Squad leaders (or vehicle commanders), section leaders, platoon leaders, and company commanders prepare sector sketches for their echelon. Accurate and detailed sketches aid in direct fire planning and in direct fire control and distribution.

a. **Platoon Sector Sketch.** The antiarmor platoon leader reviews his squads' and sections' sector sketches and ensures that the sketches are accurate. If he finds any gaps of coverage or flaws, the platoon leader adjusts weapons locations or sectors. Once the platoon leader approves the squad and section sector sketches, he prepares a consolidated report for the company commander and incorporates this into a consolidated platoon sector sketch. The platoon leader or platoon sergeant prepares the platoon sector sketch. The sector sketch may

be on acetate taped to a map or it can be a hand drawn sketch.

b. **Company Sector Sketch.** The company commander incorporates all of the platoon sector sketches and any separate key weapon system range cards into a consolidated company sector sketch. If he finds any gaps of coverage or flaws, he immediately corrects the deficiency by repositioning units or key weapon systems or by covering gaps with observation, obstacles, and indirect fires.

NOTE: FBCB2-equipped ICVs within the SBCT antiarmor company provide leaders with a more accurate means of recording and sharing sector sketch and range card data. If the company commander finds any gaps or other flaws, he adjusts weapons locations or the graphic control measures within the FBCB2 system. He can then quickly disseminate changes to all of his subordinates and to his higher headquarters.